

Patent Claims:

1 – 6 (canceled)

7. (new) A method for monitoring and carrying out a diagnosis of a technical installation, comprising:

deriving a temperature pattern from a number of temperature values and temperature information related to the technical installation and related to a current operating situation of the technical installation;

comparing the derived temperature pattern to a known failure temperature pattern and a stored failure temperature pattern and a process disturbance temperature pattern related to a specific operating situation of the technical installation; and

classifying the current operating situation as a normal and stationary and transient and tolerable and abnormal and dangerous operating situation of the technical installation based on the comparison.

8. (new) The method according to claim 7, further comprising storing the classification of the current operating situation and its related temperature pattern in a memory, preferably a database, for a future comparison with a future temperature pattern occurring during a future operation of the technical installation.

9. (new) The method according to claim 8, further comprising acquiring the temperature values and temperature information by means of an infrared camera.

10. (new) An apparatus for carrying out diagnosis of a technical installation, comprising:

a data acquisition module adapted to acquire a number of temperature values and temperature information related to the technical installation; and

an analysis module adapted to derive a temperature pattern related to a current operating situation of the technical installation from the temperature values and temperature information, comparing the temperature pattern to a known failure temperature pattern and stored failure temperature pattern and process disturbance temperature pattern related to a

specific operating situation of the technical installation and to classify the current operating situation as a normal, stationary, transient, tolerable, abnormal, and dangerous operating situation of the technical installation.

11. (new) The apparatus according to claim 10, further comprising a memory adapted to store the classification of the current operating situation and its related temperature pattern for a future comparison with a future temperature pattern occurring during a future operation of the technical installation.

12. (new) The apparatus according to claim 10, further comprising an infrared camera included by the data acquisition module.

13. (new) The apparatus according to claim 11, wherein the memory is a database.